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158372

Dewberry & Davis
(analytical summary)

ARI00014

above the VWCB action level of 1.0 ppm for UST closures; a Barium level of 4.15 ppm, which is below the Maximum Contaminant Level (MCL) of 2.0 ppm; a Cadmium level of 0.681 ppm, which is above the MCL of 0.005 ppm, the Chronic Water Quality Criteria (WQC) of 0.0015 ppm and the Acute WQC of 0.0060 ppm; a Chromium level of 0.01 ppm, which is below the MCL of 0.1 ppm and the Chronic WQC of 0.2806 ppm; and, a Lead level of 0.14 ppm, which is above the MCL of 0.015 ppm, the Chronic WQC of 0.0051 ppm and the Acute WQC of 0.1310 ppm; and, all other parameters/constituents analyzed were below their laboratory detection limits.

Based on the elevated petroleum hydrocarbon ion count in PSG Sample 2, and the elevated levels of TPH, Cadmium and Lead in the ground water sampling well, there is a potential for TPH and metals impacted water in the Taking. Furthermore, elevated levels of TPH and metals were encountered in ground water samples from the Drum Area at Virginia Scrap Iron & Metal #1 (Lead at 0.10 ppm) and at the downstream one-third of the Norfolk Southern #8 Taking (TPH at 1.8 ppm and Lead at 0.35 ppm), which may be indicative a wide impact in the Takings of these three (3) properties. It is recommended that a Phase II B investigation be conducted consisting of three (3) hand auger/temporary ground water sampling wells installed on the lower banks of the Taking (area is not accessible to the drill rig) with analysis for TPH, Lead and Cadmium. It is also recommended that the existing well be resampled and tested for TPH by Gas Chromatograph (GC).

It should be noted that the construction in this Taking may entail extensive excavation which may encounter large amounts of scrap metal, drums, vehicles, tanks or other vessels which may require special consideration for disposal.

2.0 SUSPECT CONDITIONS

Based on the Phase I EA research and field reconnaissance, the following suspect conditions were noted (refer to the Suspect Conditions Site Plan):

- The site has extensive deposition of scrap metal, including drums, tanks, rail road cars, vehicles, slag and structural members both within the Taking and the Residual Property.

3.0 ADDITIONAL RESEARCH

As the suspect conditions were readily apparent during the Phase I EA, additional research was not deemed necessary.

4.0 FIELD INVESTIGATIONS AND LABORATORY ANALYSES

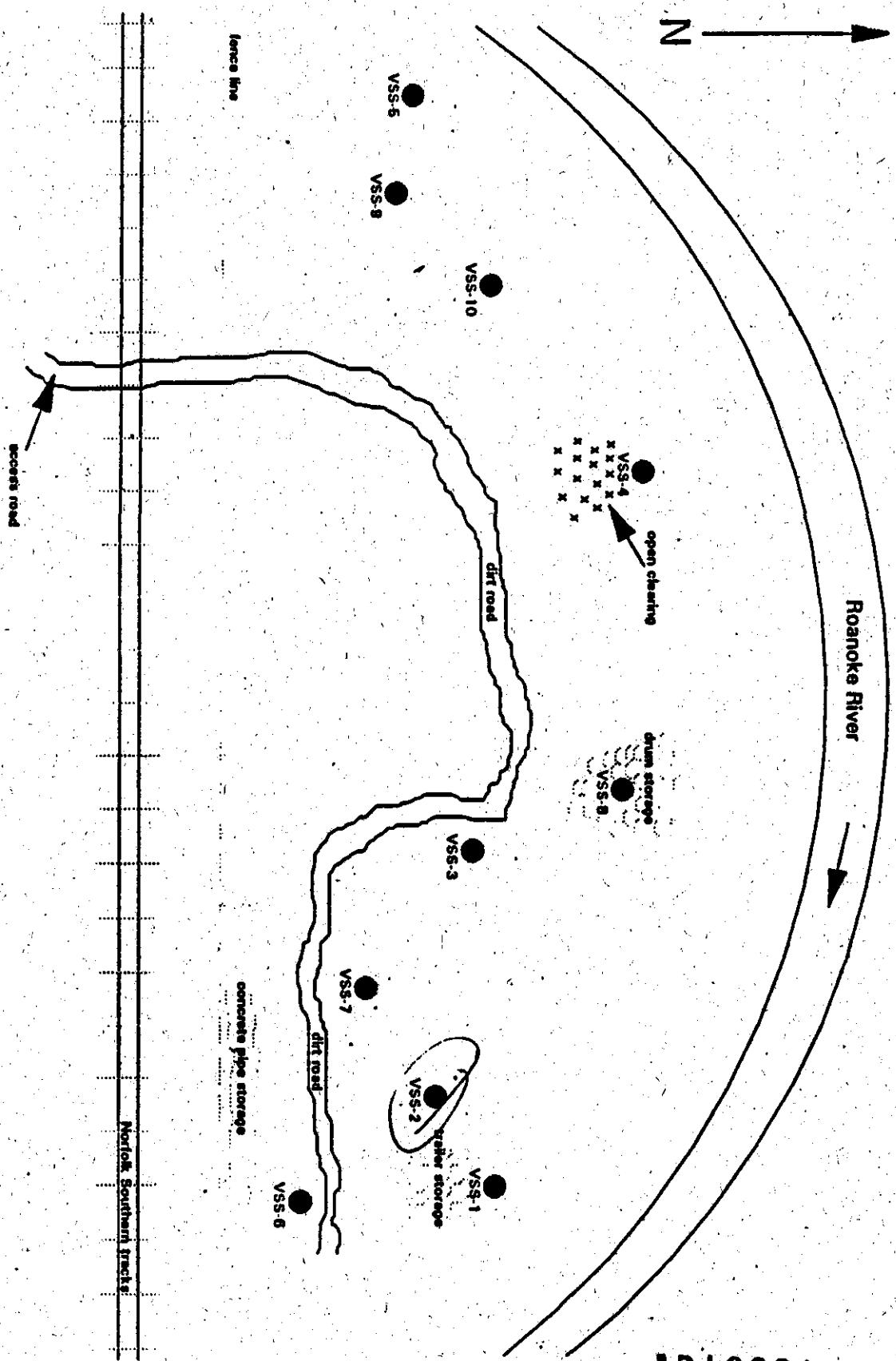
Based on the suspect conditions identified in the Phase I EA research, it was proposed to install five (5) PSG samplers and one (1) ground water sampling well.

The specifics for conducting the PSG surveys, for drilling and sampling, for the laboratory analysis, and for the Quality Control/Quality Assurance (QC/QA) are discussed in detail in the Background/Support Document for this Project. Copies of the PSG Laboratory Results/Interpretations are attached in Appendix 1; Boring Logs for the ground water sampling well, with soil descriptions, sample depths,

Virginia Scrap Iron & Metal

Sample Location Map

Not To Scale
Drawn By Region III TAT



AR100016

Site Name: ROANOKE RIVER CONTROL

Site Name: ROANOKE RIVER CONTROL Case #: 21633 Sampling Date(s): 2/15 17/96

SOIL SAMPLES (mg/kg)

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* Due to dilution, sample quantitation limit is at 50 ng/ml. See dilution table for specific dilutions.

CDRL = Contract Required Detection Limit

Action Level Events

SEE NARRATIVE FOR CODE DEFN

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DATA SUMMARY FORM: INORGANICS

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Site Name: ROUNKE RIVER CONTROL

Case #: 21633 Sampling Date(s): 2/15, 17/94

SDG # MCP232

SOIL SAMPLES
(mg/Kg)

+ Due to dilution, sample quantitation limit is a
See dilution table for specific dilution factor

Sample No.	MCP009	MCP010	MCP011	MCP012	MCP013	MCP014	MCP015	MCP016	MCP017	MCP018	MCP019	MCP020	MCP021	MCP022	MCP023
Dilution Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
% Solids	80.0	80.0	87.6	76.0	71.0	69.0	80.0	68.9	87.5	72.8	72.8	87.5	87.5	72.8	72.8
Location	VSS-10	VSS-11	VSS-12	VSS-13	VSS-14	VSS-15									
DIL OF															
CRDL ANALYTE															
40 - Aluminum	17800	5480	4330	7690	8780	7520	12700	8200	2860	10300	10300	10300	10300	10300	10300
12 - Antimony	UL	UL	UL	UL	UL	UL	UL	UL	UL	UL	UL	UL	UL	UL	UL
2 - Arsenic	5.3	6.0	3.1	4.1	6.0	4.1	5.3	5.3	5.3	11.53	11.53	11.53	11.53	11.53	11.53
40 - Barium	90.0	61.2	46.0	70.0	129	98.0	67.3	148	77.0	123	123	77.0	77.0	123	123
1 - Beryllium	10.401	10.251	10.131	10.461	10.751	10.631	10.651	10.521	10.521	10	10	10	10	10	10
1 - Cadmium	10.501	10.611	10.611	10.591	10.591	10.591	10.591	10.591	10.591	10	10	10	10	10	10
1000 - Calcium	2660	11300	7380	8680	22300	15000	17800	41600	110000	143000	143000	143000	143000	143000	143000
2 - Chromium	19.1	17.4	15.3	18.6	17.6	21.3	25.5	19.3	7.9	25	25	7.9	7.9	25	25
10 - Cobalt	15.2	7.4	16.21	18.7	110.91	18.91	17.41	17.91	12.01	112	112	12.01	12.01	112	112
5 - Copper	20.8	20.6	15.5	19.5	34.7	21.6	20.5	13.5	10.2	60	60	10.2	10.2	60	60
20 - Iron	31000	18300	15600	22200	21800	19800	26100	18100	6010	26700	26700	6010	6010	26700	26700
0.6 - Lead	32.5	52.0	42.2	37.3	58.7	61.0	83.8	35.3	7.6	89	89	7.6	7.6	89	89
1000 - Magnesium	1550	6810	3900	4160	11500	5750	60900	5820	23300	7230	7230	7230	7230	7230	7230
3 - Manganese	426	403	K	263	K	417	K	532	K	457	K	457	K	457	K
0.1 - Mercury	0.121	(0.081)	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081	0.081
8 - Nickel	11.5	9.7	8.61	12.4	17.6	14.2	19.11	111.01	15.61	10	10	15.61	15.61	10	10
1000 - Potassium	1610	1060	9131	10501	1190	11180	2330	1751	1751	1490	1490	1751	1751	1490	1490
1 - Selenium	11.11	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 - Silver	11.21	10.991	11.43	11.11	11.53	11.71	124.01	124.01	124.01	11	11	11	11	11	11
1000 - Sodium	10.91	9	124.11	9	122.61	9	130.31	9	130.31	9	130.31	9	130.31	9	130.31
2 - Thallium	17.7	15.0	22.1	26.2	31.9	19.9	17.91	17.91	17.91	29	29	17.91	17.91	29	29
10 - Vanadium	39.8	39.8	229	139	72.6	107	26.0	26.0	26.0	180	180	26.0	26.0	180	180
4 - Zinc	99.5	136	86.7	98.7	139	139	139	139	139	139	139	139	139	139	139
1 - Cranide	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CRDL = Contract Required Detection Limit

*Action Level Existing

SEE NARRATIVE FOR CODE DEFINITION
revise

AR100018